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Proceedings Series 2017/040

National Capital Region

Proceedings on the National Peer Review of Science guidance for Fisheries Protection Policy: Advice on Offsetting Techniques for Managing the Productivity of Freshwater Fisheries

June 4-6, 2013
Ottawa, Ontario

Chairperson: Jake Rice and Roger Wysocki
Editor: Erika Thorleifson and Lauren Ellis

Fisheries and Oceans Canada
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October 2017

Canada

Foreword

The purpose of these Proceedings is to document the activities and key discussions of the meeting. The Proceedings may include research recommendations, uncertainties, and the rationale for decisions made during the meeting. Proceedings may also document when data, analyses or interpretations were reviewed and rejected on scientific grounds, including the reason(s) for rejection. As such, interpretations and opinions presented in this report individually may be factually incorrect or misleading, but are included to record as faithfully as possible what was considered at the meeting. No statements are to be taken as reflecting the conclusions of the meeting unless they are clearly identified as such. Moreover, further review may result in a change of conclusions where additional information was identified as relevant to the topics being considered, but not available in the timeframe of the meeting. In the rare case when there are formal dissenting views, these are also archived as Annexes to the Proceedings.

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Aussi disponible en français :

MPO. 2017. Compte rendu de la réunion nationale d'examen par les pairs sur les Lignes directrices scientifiques relatives à la politique sur la protection des pêches : avis sur les techniques de compensation concernant la gestion de la productivité des pêches en eau douce; du 4 au 6 juin 2013. Secr. can. de consult. sci. du MPO, Compte rendu 2017/040.

SUMMARY

These Proceedings provide a brief overview of the national science advisory meeting held on June 4-6, 2013 in Ottawa, Ontario. The conclusions and advice resulting from this meeting will be provided in the form of a Science Advisory Report that will be made publicly available on the Canadian Science Advisory Secretariat website. Meeting participants included experts from various sectors and regions of Fisheries and Oceans Canada. The purpose of this meeting was to review methods that could be used to offset fisheries productivity losses due to human development within aquatic ecosystems, to provide operational guidance to the Fisheries Protection Program. Two working papers were distributed prior to the meeting on the topics of:

- Science-based guidance for choosing surrogate measures of fisheries productivity.
- A Review of Scientific Evidence Supporting Generic Productivity-State Response Curve.

SOMMAIRE

Ce compte rendu donne un aperçu de la réunion nationale de consultation scientifique qui a eu lieu du 4 au 6 juin 2013 à Ottawa, en Ontario. Les conclusions et avis découlant de cette réunion seront présentés sous la forme d'un avis scientifique qui sera rendu public sur le site Web du Secrétariat canadien de consultation scientifique (SCCS). Des experts de divers secteurs et de diverses régions de Pêches et Océans Canada ont participé à la réunion. Le but de cette réunion était d'examiner des méthodes qui pourraient servir à compenser les pertes de productivité des pêches causées par les activités anthropiques dans les écosystèmes aquatiques, puis de fournir des directives opérationnelles aux représentants du Programme de protection des pêches. Les deux documents de travail suivants ont été distribués avant la réunion :

- Normes scientifiques pour choisir des mesures substitutives de la productivité des pêches
- Examen des preuves scientifiques à l'appui des courbes de réponse génériques productivité-état

INTRODUCTION

A Fisheries and Oceans Canada (DFO) Canadian Science Advisory Secretariat (CSAS) national peer review meeting was held on June 4 - 6, 2013, in Ottawa, Ontario to provide advice on the implementation of section 35 of the amended *Fisheries Act*. Canada's *Fisheries Act*, amended via Bill C-38 (last amended June 29, 2012), refers to the "ongoing productivity of commercial, recreational and Aboriginal fisheries". DFO's Program Policy Sector requested scientific advice regarding the operational measures of fisheries productivity and the operational tools to assess potential impacts on fisheries productivity.

The Terms of Reference for the science review (Appendix 1) were developed in response to this request for advice from the DFO Program Policy Sector. Two working papers were prepared and made available to meeting participants prior to the meeting on the topics of:

- Science-based guidance for choosing surrogate measures of fisheries productivity
- A Review of Scientific Evidence Supporting Generic Productivity-State Response Curves

Jake Rice and Roger Wysocki (co-chairs) opened the meeting by welcoming the participants and providing a brief overview of the CSAS peer-review process. It was explained that the purpose of the meeting was to provide a thorough scientific review of the information presented in the two working papers, with the intent to provide science advice on the operational measures of fisheries productivity and the operational tools to assess potential impacts on fisheries productivity. Each participant was introduced as there was representation from a variety of divisions of DFO (Appendix 2). The co-chairs reviewed the agenda (Appendix 3), discussed deadlines for the expected publications, and verbally determined that there was consensus for the Terms of Reference.

PRESENTATIONS AND DISCUSSIONS

Nicholas Winfield, the Director of the Fisheries Protection Program (FPP) Policy sector, gave a brief presentation on the context of the request for this meeting. Some discussion followed.

Chad Ziai, the Manager of FPP Operations, gave a brief presentation on the current operational decision-making framework used by FPP. Some discussion followed.

Keith Clarke and Kristin Loughlin, the authors of the working paper titled *a review of methods used to offset residual impacts of development projects on fisheries productivity*, gave a presentation summarizing their research. A group discussion about the research followed in which each method with the potential to increase fish productivity was scrutinized. The bulk of the discussions pertained to this working paper which was accepted by the participants and converted into a Research Document (Loughlin & Clarke, 2014) for publication on the CSAS website.

Derrick de Kerckhove, the author of the second working paper titled *a review of promising indicators of fisheries productivity for the fisheries protection program assessment framework*, gave a presentation summarizing the research conducted. The original intention was to peer review this working paper as well, but it was not ready by the deadline. Alternatively, it was presented to facilitate discussion and was not converted into a Research Document at this meeting. On September 30, 2013, a CSAS process was conducted on the Operational Advice for Fisheries Protection Program. Participants at this September meeting peer reviewed the de Kerckhove working paper developed previously. The discussions were summarized in the

Proceedings of this latter meeting (DFO, 2015). The feedback provided by the participants was incorporated and the working paper was accepted as a Research Document (de Kerckhove, 2015).

CONCLUSION

The Science Advisory Report was developed in collaboration with the participants during the meeting. After notice of the meeting planned for September to advise the Fisheries Protection Program, it was agreed that the de Kerckhove working paper would be peer reviewed then.

REFERENCES CITED

de Kerckhove, Derrick T. 2015. Promising Indicators of Fisheries Productivity for the Fisheries Protection Program Assessment Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/108. vi + 69 p.

DFO. 2015. Proceedings of the National Peer Review of Operational Advice for Fisheries Protection Program; September 30 to October 3, 2013. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2015/031.

Loughlin, K.G., Clarke, K.D. 2014. A Review of Methods Used to Offset Residual Impacts of Development Projects on Fisheries Productivity. DFO Can. Sci. Advis. Sec. Res. Doc. 2013/097. vi + 72 p.

APPENDIX 1: MEETING TERMS OF REFERENCE

Science guidance for Fisheries Protection Policy: Advice on Offsetting Techniques for Managing the Productivity of Freshwater Fisheries

National Peer Review - National Capital Region

June 4-6, 2013
Ottawa, Ontario

Chairperson: Dr. Jake Rice

Context

Recent changes to the *Fisheries Act* (2012) will change the way Department assesses and manages impacts on aquatic ecosystems. The amended Act will require the Department to protect the ongoing productivity of fish populations or communities that either contribute to or support fisheries within Canada. To help managers make consistent decisions with respect to protecting ongoing productivity the amendments also included a new section, section 6, which outlines four considerations that the minister must take into account before authorizing a project that has the potential to do serious harm. Section 6(c) specifically requires the Minister to ensure that methods to avoid, mitigate or *offset* serious harm have been considered before a decision to authorize is made.

DFO Program Policy Sector has requested scientific guidance towards the implementation of these amendments to the *Fisheries Act*. Participants will review methods that could be used to offset fisheries productivity losses due to human development within aquatic ecosystems, to provide operational guidance to the Fisheries Protection Program.

Objectives

1. Conduct a peer review of the working paper entitled "*A Review of Methods Used to Increase Fisheries Productivity*" (K.G. Loughlin, K.D. Clarke et al.).
2. Provide science advice and guidance to policy-makers and managers regarding the operational use of *offsetting* by the Fisheries Protection Program, including recommended "best practices" (where information is sufficient for recommended practices to be identified).
3. Conduct a peer review of the working paper entitled "A literature review of promising indicators of fisheries productivity for the new Fisheries Protection Program assessment framework." (working title) (D.T. de Kerckhove, K.E. Smokorowski et al.).
4. Provide science advice and guidance to policy-makers and managers regarding the operational selection of *metrics of productivity* for use by the Fisheries Protection Program.
5. In light of science advice provided, identify any additional or on-going Science work required to support the new Fisheries Protection Program.

Expected Publications

- Science Advisory Report(s)
- Proceedings
- Research Documents (2)

Participation

- Fisheries and Oceans Canada (DFO) (Ecosystems and Oceans Science, and Ecosystems and Fisheries Policy and Management sectors)
- Other invited experts

APPENDIX 2: LIST OF MEETING PARTICIPANTS

Name	Affiliation
Jake Rice **chair**	DFO National Capital Region / Ecosystem Science Directorate
Roger Wysocki **chair**	DFO National Capital Region / Ecosystem Science Directorate
Erika Thorlefison	DFO National Capital Region / Aquaculture, Biotechnology and Aquatic Animal Health Science Branch
Nicholas Winfield	DFO National Capital Region / Ecosystem Programs Policy
Bronwyn Keatley	DFO National Capital Region / Ecosystem Science
Anne Phelps	DFO National Capital Region / Habitat Management Policies and Practices
Glen Hopky	DFO National Capital Region / Habitat Management Policies and Practices
Chantal Ménard	DFO National Capital Region / Habitat Management Policies and Practices
Alwyn Rose	DFO National Capital Region / Habitat Management Policies and Practices
Chad Ziai	DFO National Capital Region / Fisheries Protection Program
Melanie Boivin	DFO National Capital Region / Fisheries Protection Program
Michel Nardini	DFO National Capital Region / Fisheries Protection Program
Simon Nadeau	DFO National Capital Region / Fish Population Science
Keith Clarke	DFO Newfoundland & Labrador / Environmental Sciences Section
Kristin Loughlin	DFO Newfoundland & Labrador / Environmental Sciences Section
Michelle Roberge	DFO Newfoundland & Labrador / Fisheries Protection Program
Guy Robichaud	DFO Gulf / Ecosystems Management
Francois Hazel	DFO Quebec / Ecosystems and Fisheries Management
Daniel Duplisea	DFO Quebec / Demersal and Benthic Science Branch
Susan Doka	DFO Central and Arctic / Great Lakes Laboratory for Fisheries and Aquatic Sciences
Doug Watkinson	DFO Central and Arctic / Habitat Impacts
Karen Smokorowski	DFO Central and Arctic / Great Lakes Laboratory for Fisheries and Aquatic Sciences
Marten Koops	DFO Central and Arctic / Fish Habitat
Robert Randall	DFO Central and Arctic / Great Lakes Laboratory for Fisheries and Aquatic Sciences
Julie Dahl	DFO Central and Arctic / Fisheries Protection Program
Martyn Curtis	DFO Central and Arctic / Fisheries Protection Program
Mike Bradford	DFO Pacific / Ecosystems Sciences Division
Jason Hwang	DFO Pacific / Oceans, Habitat and Enhancement

APPENDIX 3: MEETING AGENDA

Tue. June 4th

0900h – Welcome, review Terms of Reference, updates on related CSAS events.

0915h – Update and discuss CSAS to support FPP #2 (March 2013).

0930h – Presentation on Policy Request for Advice on "Offsetting" Productivity (N. Winfield, Director FPP Policy). Followed by Q&A.

1000h – Presentation on Operational Decision-making Framework (C. Ziai, Manager, FPP Operations). Followed by Q&A.

1030h – Coffee break

1045h – Presentation – Summary of **"Offsetting" Working Paper** (K. Clarke and K. Loughlin). Followed by Q&A.

1200h – Lunch (on your own).

1300h – Discuss content of Working Paper appropriate for Science advisory report

1630h - Adjourn

Wed. June 4th

0830h – Recommence. Review findings of Day 1.

0900h – Presentation – Summary of "**Metrics of Productivity**" Working Paper (D. T. de Kerckhove). Followed by Q&A.

1100h - Discuss content of Working Paper appropriate for Science advisory report.

1200h – Lunch (on your own).

1300h - Discuss content of Working Paper appropriate for Science advisory report.

1630h – Adjourn.

Thur. June 5th

0830h – Recommence. Review findings of Day 2.

0900h – Discuss content of Science Advisory Report.

1200h – Lunch (on your own).

1300h – Complete Science Advisory Report.

1500h – Discuss next steps, including CSAS on FPP Risk Assessment and Risk Management.

1600h – Adjourn.